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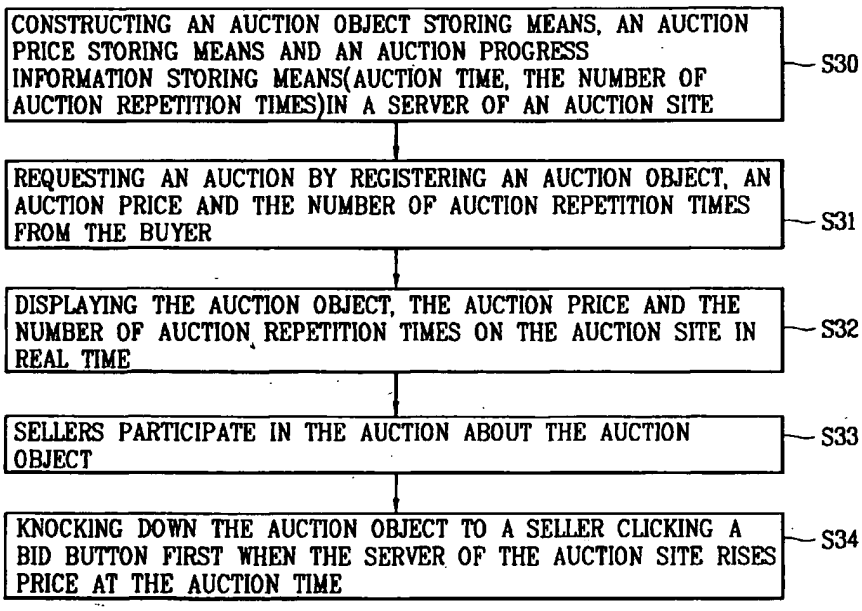
(54) Title: AUCTIONING METHOD RAISING PRICE AUTOMATICALLY



(57) Abstract: In an automatic price rising auction method, by rising the auction price on the basis of the auction start time, an auction on the Internet can be activated with rapid auction progress, and probability of successful bid can be heightened, and by rising the auction price by the unit time price rising range by a certain program of a server, time delay in auctioning can be solved by satisfying request of a seller and a buyer wanting rapid selling and rapid buying. In addition, by introducing credit points, a reliability of an auction can be improved, and impartial price determining opportunities can be given to the seller and the buyer.

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AUCTIONING METHOD RAISING PRICE AUTOMATICALLY

TECHNICAL FIELD

The present invention relates to an automatic price rising auction method over the Internet which is capable of proceeding an auction rapidly by placing great importance on an auction start time and rising a purchase price according to a price rising range by unit time at the same time with a start of auction and improving a reliability of auction and e-commerce by evaluating and providing a credit rating of a seller and a buyer.

BACKGROUND ART

Generally, the Internet is an open network which makes possible anyone in anywhere to connect freely to a computer of the other party by adapting a common protocol such as a TCP/IP, and the Internet can provide various services such as an electronic mail, a file transmission, the WWW (World Wide Web), etc. not to speak of a basic character information transmission and a multimedia information transmission according to development of a data compression technology.

The importance of the Internet has been rapidly increased as a strategic instrument for enhancing efficiency and productivity of the conventional industries while it spreads all over the world as well as

domestic, new business chances through the Internet are continually generated as well as expansion of Internet business ranges, accordingly business proprietors using the Internet increase gradually.

In other words, recently Internet sites for providing various contents such as an Internet broadcast, an on-line game, an Internet newspaper/magazine, a search service, a portal service, an electronic commerce, etc. rapidly increase as a business model through the Internet.

Among them, the number of auction sites which provide services for buying/selling needed products or real estates each other on the Internet by adapting an auction method is largely increasing, and these auction sites attract public attention.

Figure 1 is a block diagram illustrating an auction service through the Internet. In general, only subscribers can join auctions on an auction site 10. Accordingly, a user who wants to use the auction service through the Internet 20 has to contact and join the auction site 10, and the user can register an item or a service to sell and a selling price.

And, the auction site 10 puts the item or service up at the auction, each subscriber (after, it is called as a seller) contacting to the auction site 10 through the Internet 20 registers an item to sell on the auction site 10 by using a computer 30-1 of a first seller or a computer 30-N of a N seller, and the auction site 10 announces the auction through the Internet 20.

A buyer who wants to buy the item announced on the auction site

10 inputs a purchase price for the auction item through a computer 40-1 of a first buyer or a computer 40-M of a M buyer. Herein, offering the price is called as a bid. The bid is transmitted to the auction site 10, and generally an auction period (such as three days, a week etc.) per each item is determined.

And, when the auction period ends, the buyer who calls the highest purchase price for the auction item concludes a contract with the seller who registered the auction item on the auction site 10.

Figure 2 is a flow chart illustrating the conventional auction service process. The conventional auction service process will now be described in detail with reference to accompanying Figure 2.

When the auction site 10 receives bid information about the auction item from the computers 40-1 ~ 40-M of the sellers as shown at S201, it updates the present price of the auction item registered on the auction site 10 according to the bid information as shown at S202. And, it judges whether the auction period ends as shown at S203, when the auction period does not ends, it is returned to S201 and waits new bid information reception. However, it finishes the auction when the auction period ends as shown at S204.

In the conventional auction process, the buyer can not know the present bid unless he/she contacts to the auction site 10 continually in order to check the proceeding until the auction period is ends. Accordingly, economic loss due to the continuous contact to the auction site occurs until the auction period ends. In other words, the conventional

auction causes the economical loss because it concentrates on the end time of the auction period.

In addition, the conventional auction process is the auction method which proceeds the auction with the buyer as the central figure; the seller has to wait passively after registering the auction item on the auction site until the auction ends, and also may have economic loss when there is only low bids by an operation of buyers. In addition, when the seller can not take the item purchase money from a buyer after the auction item is knocked down to the certain buyer, there is short of protection means for the seller.

In addition, in the conventional auction process, because the auction continually proceeds for a certain period determined by the auction site 10, it can not satisfy a request of a seller and a buyer who want a rapid selling and a rapid buying.

In addition, in the conventional auction process, there is short of countermeasures about a buying reject and a selling reject.

TECHNICAL GIST OF THE PESENT INVENTION

In order to solve the above-mentioned problems, it is an object of the present invention to provide an automatic price rising auction method which is capable of providing impartial opportunities to both a seller and a buyer in an auction performed on the Internet by offering two purchase prices by a buyer and selecting a purchase price by a seller according to

the rise of a purchase price from a lower purchase price to a higher purchase price.

It is another object of the present invention to provide an automatic price rising auction method which is capable of selling an auction object quickly by proceeding an auction on the basis of a start time.

In addition, it is still another object of the present invention to provide an automatic price rising auction method which is capable of improving a reliability of auction and e-commerce by including a method for measuring a reliability of a seller and a buyer.

BRIEF DESCRIPTION OF DRAWINGS

Figure 1 is a block diagram illustrating a system contacting to an auction site, a seller and a buyer over the Internet;

Figure 2 is a flow chart illustrating the conventional auction method;

Figure 3A is a block diagram illustrating a computer system in accordance with an embodiment of the present invention;

Figure 3B is a flow chart illustrating a price rising auction method in accordance with the present invention;

Figure 4A illustrates a first embodiment of an auction time and the number of auction repetition times (auction timetable) in the step (S31) of Figure 3;

Figure 4B illustrates a second embodiment of an auction time and the number of auction repetition times (auction timetable) in the step (S31) of Figure 3;

Figure 4C illustrates a third embodiment of an auction time and the number of auction repetition times (auction timetable) in the step (S31) of Figure 3;

Figure 5 illustrates an embodiment of an auction time, an auction object, an auction price and the number of auction repetition times displayed on the auction site of the step (S32) of Figure 3;

Figure 6 illustrates an embodiment showing a price fall during an auction progress in the step (S33 or S34) of Figure 3; and

Figure 7 is a flow chart illustrating processes for knocking down an auction object in the auction progress of the step (S34) of Figure 3.

DETAILED DESCRIPTION OF THE INVENTION

An automatic price rising auction method in accordance with the present invention provides an auction service over the Internet.

Figure 3A is a block diagram illustrating a computer system in accordance with the present invention, the computer system includes a server 30 opening and operating an auction site, a buyer contact means 31 contacting to a server 30 of the auction site and buying movable property and real property (hereinafter, they are called as auction objects), and a seller contact means 32 selling the auction object by

contacting to the auction site. The server 30 includes an interface means (not shown) contactable with the buyer contact means 31 and the seller contact means 32, a CPU 300, an auction object storing means 301 being inputted information (item, quantity, quality, production year, etc.) about the auction object from the buyer contact means 31, an auction price storing means 302 storing not less than one purchase price about the auction object, an auction progress information storing means 303 storing an auction period about the auction object, a time display means 305 being inputted the rest of the auction period from the CPU 300 and displaying it on the auction site, and a price display means being inputted the present auction price of the auction object from the CPU 300 and displaying it on the auction site. In addition, the server 30 further includes a credit information storing means (not shown) storing a certain program calculating a credit of the buyer and the seller in order to calculate a credit of the buyer and the seller and report it on the auction site. The storing means can be a hard disc, a magnetic tape, a compact disc, various drives, etc. according to the prior art, and the auction progress information storing means 303 can have a certain program rising the auction price. The CPU 300 performs operations such as an rising an auction price in the auction progress by operating the program.

Figure 3b is a flow chart illustrating an auction method in accordance with the present invention, an auction method in accordance with the present invention includes an auction object storing means 301, the auction price storing means 302 and the auction progress information

means 303 (auction time, the number of auction repetition times) as shown at step S30, registering an auction object, an auction price, an auction time and repetition times on the auction site by the buyer as shown at step S31, displaying the auction object, auction price, auction time and repetition times on the auction site in real time by the server 30 of the auction site, participating in the auction of the auction object by the seller, and knocking down the auction object to the seller clicking a bid button first when the server 30 of the auction site rises the auction price of the auction object from the auction time on the auction site as shown at step S34.

In the construction of the present invention, in the step S30, the auction object storing means 301 is inputted information (production date, quality, quantity, etc.) about the auction object from the buyer and stores it, the auction priee storing means 302 is inputted a purchase price (or a certain price) about the buyer request auction object, a highest purchase price, a lowest purchase price and stores it, the auction progress information storing means 303 stores at least one auction time information about the auction object according to kinds of the auction object, is inputted the number of auction repetition times from the buyer in order to prepare for a failure of auction and stores it, in order to purchase the auction object (movable property or real estate) in the step S31, the buyer contacts to the auction site, inputs the information about the auction object to the auction object storing means 301, inputs a purchase price, the highest purchase price and the lowest purchase price

to the auction price storing means 302, selects the pre-stored auction time from the auction progress information storing means 303 on the auction site and inputs the number of auction repetition times, accordingly the buyer has registered the auction. The buyer can set freely the purchase price, herein the highest purchase price and the lowest purchase price can be determined within a certain price range determined by the auction site. For example, the highest purchase price can be one of +40%, +50%, +80%, +100% of the purchase price, and the lowest purchase price can be one of –20%, -40%, -60% of the purchase price. In the step S32, the server 30 of the auction site displays the auction object, the auction price (purchase price, the highest purchase price, the lowest purchase price) and the auction progress information (auction time, the number of auction repetition times) on the auction site in real time, in the step S33, the seller contacts to the auction site, participates in an auction by checking the auction object, the auction price and the auction progress information, in the step S34, when the server 30 of the auction site rises the auction price from the lowest auction price at the auction start time on the auction site, the auction object is knock down to the seller clicking a bid button first. Herein, the number of sellers contacting to the auction site is not disclosed.

When the seller and the buyer contact to the auction site and participate in the auction for the first time, in order to evaluate a reliability of the buyer and the seller, for example, credit points of 100 are provided to the buyer and the seller, when the seller and the buyer contact to the

auction site at least one time, credit points of the seller is stored in the credit information storing means of the server 30 of the auction site.

Figure 4A ~ 4C illustrate the auction time and the number of auction repetition times (auction timetable) in the step (S31) of the Figure 3, in more detail, the server 30 of the auction site provides at least one auction timetable, which is first classified according to the auction object of the buyer, and then is classified according to an auction start time. The auction timetable is constructed with an auction start time, a buyer's name and the number of auction repetition times, herein the server 30 of the auction site pre-stores the auction start time, accordingly delay and duplication of the auction can be prevented. The buyer selects one of the auction timetables and inputs a buyer and the number of auction repetition times of the selected auction timetable. The number of auction repetition times means the number of performing an auction on the auction site, when the auction about the auction object is failed in a first auction, if the number of auction repetition times is 0, the auction is failed and ends, and if the number of auction repetition times is 2, the auction restarts. When the buyer selects the auction timetable of FIG.4A, the auction start time 09:00 and 10:00 are selected by the other buyer already, the buyer can select 10:40 or can search another auction timetable. When the buyer selects the auction timetable of FIG.4B, the buyer can select 11:00 or has to search another auction timetable. When the buyer selects the auction timetable of FIG.4C, the buyer can select 10:50 or can search another auction timetable. In more detail, when the

buyer contacts to the auction site at 10:35, the buyer can reduce the standby time by selecting the auction timetable of FIG.4A or FIG.4B. The server 30 can give limitation in selecting of timetables to the buyer by differentiating credit grades in accordance with the credit points of the buyer in the auction timetable select process. In other words, it is possible to make an auction timetable in which only buyers having not less than a credit of 80 points can register.

FIG.5 illustrates the embodiment of auction time, auction object, auction price and the number of auction repetition times reported on the auction site in the step S32 of Figure 3. In more detail, the auction start time and the number of auction repetition times are based on the auction timetable stored on the auction progress information storing mean 303 and selected by the buyer, the auction object is based on the information stored in the auction object storing means 301, and the purchase price, the highest purchase price and the lowest purchase price are based on the information stored on the auction price storing means 302, accordingly the server 30 makes out the information and displays it on the auction site. A seller retrieves the auction object and participates in the auction. The auction object is updated in real time, the present auction circumstances are provided to the all sellers and buyers. Herein, the auction site can give limitation in participating in the auction to the buyer in accordance with credit points of the buyer, accordingly the reliability of the auction can be improved.

FIG.6 illustrates the embodiment of displaying price rising in

auction progress steps S33 and S34 of FIG.3. In more detail, the auction price display graph 60, bid button 61, rest time display 62 are displayed. In addition, a purchase price, the highest purchase price and the lowest purchase price of the auction object are displayed. The auction starts from the lowest purchase price at the same time with the auction start time, when a seller clicks the bid button 61, the auction ends. However, when the unit time is passed, the deviant line part of the auction price display graph 60 is increased according to the unit time price rising rate predetermined in the auction site, and the present auction price rising is displayed. When the auction price reaches to the highest purchase price by rising according to the unit time and any seller do not click the bid button 61, the auction is failed. The unit time price rising rate can be determined as the price rising per the unit time or the rising percentage (%). The rest time display 62 means the time difference from the present time to a start time of a next auction in the auction timetable.

Figure 7 is a flow chart illustrating a knocking down process of the auction object in the step S34 of Figure 3. In more detail, it includes logging in the auction site by a buyer and a seller as shown at step S700, starting an auction as shown at step S701, judging whether the seller clicks the bid button as shown at step S703, rising an auction price as shown at step S704, judging whether the click signal from the seller is a first signal arrived in the server 30 of the auction site as shown at step S705, knocking down the auction object to the seller as shown at step S706, judging the number of auction repetition time as shown at step

S707, judging whether all auctions in the auction timetable proceed as shown at step S708, updating the auction timetable as shown at step S709, and ending the auction as shown at step S710.

In the logging in step as shown at step S700, the buyer and the seller log in the auction site by using a certification. provided from the auction site or ID/password, etc., and the auction starts at the auction start time of the auction timetable selected by the buyer in step S701. At the same time with the auction start, the server 30 of the auction site determines unit time price rising range and starts the auction, judges whether the seller clicks the bid button 61 in the judging step S702, when it is judged as 'no', judges whether a present auction price is the highest purchase price in the judging step S703, but when it is judged as 'yes' in the judging step S702, judges the number of auction repetition times in the judging step S707. When there are several bid button clicks for a few seconds by different sellers before displaying successful bid notification on the auction site, in the judging step S705 the server 30 checks the first arrival click and awards the contract to a pertinent seller. When it is judged as 'yes' in the judging result of step S705, the contract is awarded to the seller as shown at step S706, the result is instantly displayed on the auction site and the auction ends. When it is judged as 'no' in the judging result of step S705, it means the auction object is knock down to another seller and the auction ends as shown at step S710. The judgement of the judging step S707, the number of auction repetition times is inputted by the buyer before the auction starts, when the number

of auction repetition times is 0, the buyer requests only one auction, and the auction ends as shown at step 710. When the number of auction repetition times is not 0, the auction restarts, in the judging step S708 it is judged whether all auctions in the auction timetable are performed, the number of auction repetition times subtracted 1 by the server 30 of the auction site is updated in the auction progress information storing means 303. When it is judged as 'no' in the judging step S708, the auction is standby, the standby means waiting until all auctions in the same auction timetable are performed. When all auctions are performed in the judging step S708, the server 30 updates the auction timetable in the step S709 and restarts the auction as shown at step S701. In the update of the auction timetable, the order (the order registered by the buyer) of the auction in the auction timetable before the update is not changed, only the buyer having the number of auction repetition times as 0 is deleted, a next buyer of the deleted buyer has the order of the deleted buyer. It is according to a queue data processing method as a FIFO (first in first out) method. For example, when a buyer DD selects an auction timetable of Figure 4B, the buyer registers the auction at 11:00, when the buyer selects the number of auction repetition times as 4, there is no auction at 11:30, an auction of a buyer AA is failed, an auction of a buyer BB is successful, an auction of a buyer CC is failed and an auction of the buyer DD is failed, the auction progress order of an auction timetable updated by the server 30 of the auction site is the buyer AA - buyer CC- buyer DD, the number of auction repetition times of the buyer AA is 1, the number of

auction repetition times of the buyer CC is 2, the number of auction repetition times of the buyer DD is 3, and the number of auction repetition times are inputted and stored in the auction progress information storing means 303. The server 30 provides new auction start time to the buyers and starts auctions according to the auction progress order. In addition, when the buyer designates the number of auction repetition times as a number not 0, the buyer can input the auction price again (a purchase price, the highest purchase price, the lowest purchase price) for the standby time in the judging step S708. The server 30 can transmit the auction start time about the auction object to the buyer and the seller through a wire or wireless communication network.

In the step S710, when the auction about the auction object ends on the auction site, in order not to proceed the auction about the auction object, the server does not receive bid display signals and click signals. In addition, after ending the auction, the manager of the auction site performs a delivery and a receipt of the auction object of the seller and a money transferring and a receipt of the auction object of the buyer according to regulations of the auction site. If, the seller delays the delivery of the auction object or cancels the contract unilaterally, or the buyer delays the money transferring or the receipt of the auction object, the server 30 can lower credit points of the seller/ buyer.

By rising the auction price on the basis of the auction start time, an auction on the Internet can be activated with rapid auction progress, and probability of successful bid can be enhanced. In addition, by rising

the auction price by the unit time price rising range by a certain program of the server 30, time delay in auctioning can be solved by satisfying request of a seller and a buyer wanting rapid selling and rapid buying. In addition, by introducing credit points, a reliability of an auction can be improved, and impartial price determining opportunities can be given to the seller and the buyer.

CLAIMS

1. In an auction method for an auction site over the Internet, an automatic price rising auction method, comprising:

a first process for constructing an auction object storing means being inputted and storing information about an auction object requested by a buyer, an auction price storing means storing an auction price about the auction object requested by the buyer and an auction progress information storing means storing an auction time about the auction in a server of an auction site;

a second process for requesting an auction from the buyer to the server of the auction site by contacting to the auction site and respectively storing information about an auction object, an auction price and auction time inputted from the buyer in the auction object storing means, the auction price storing means and the auction progress information storing means;

a third process for displaying the data respectively stored in the auction object storing means, the auction price storing means and the auction progress information storing means on the auction site in real time;

a fourth process for participating in the auction by a seller for an auction period; and

a fifth process for knocking down the auction object to a seller clicking a bid button first when the server of the auction site rises a price

from one of the auction prices for the auction period on the auction site.

2. In an auction method for an auction site over the Internet, an automatic price rising auction method, comprising:

a first process for constructing an auction object storing means being inputted and storing information about an auction object requested by a buyer, an auction price storing means storing an auction price about the auction object requested by the buyer and an auction progress information storing means being inputted and storing at least one auction time according to kinds of auction object and at least one auction time data having the number of auction repetition times;

a second process for requesting an auction from a buyer to the server of the auction site by contacting to the auction site and respectively storing information about an auction object, at least one auction price and auction timetable inputted from the buyer in the auction object storing means, the auction price storing means and the auction progress information storing means;

a third process for displaying the data respectively stored in the auction object storing means, the auction price storing means and the auction progress information storing means on the auction site in real time;

a fourth process for participating in the auction for an auction period by a seller; and

a fifth process for knocking down the auction object to a seller

clicking a bid button first when the server of the auction site rises a price from one of the auction prices for the auction period on the auction site.

3. The method of claim 2, wherein the auction timetable is constructed with at least one auction start time according to a certain time interval determined by a manger of the auction site and the number of auction repetition times inputted by the buyer and displays an auction start time and an auction end time in the first process, the server of the auction site stores the auction start time and an auction progress order and the number of auction repetition times selected by the buyer in the second process, the server of the auction site displays the auction timetable on the auction site according to kinds of auction object in the third process, and the seller participates in the auction at the auction time by selecting a request auction time in the auction timetable and the auction proceeds according to the auction progress order in the fourth process.

4. The method of claim 1 or 2, wherein the fifth process includes the steps of:

rising a price of the auction object from one of the auction prices to a certain limitation price until there is a click signal from a seller for the auction period;

displaying the rising price and the rest of time through the price display means and the time display means;

knocking down the auction object to a seller clicking the bid button first before the price of the auction object reaches to the certain limitation price; and

performing a delivery and a receipt of money by the seller and transferring of money and receipt of the auction object by the buyer according to regulations of the auction site.

5. The method of claim 1 or 2, wherein the auction price includes a purchase price the highest purchase price and the lowest purchase price inputted from the buyer.

6. The method of claim 5, further comprising:

designating the highest purchase price and the lowest purchase price by the buyer by selecting one or two of price ranges provided from the server of the auction site after the buyer inputs the purchase price to the server of the auction site.

7. The method of claim 5, further comprising:

designating the highest purchase price and the lowest purchase price within the certain range of the purchase price by the sever after the buyer inputs the purchase price to the server of the auction site and storing those prices.

8. The method of claim 5, wherein the server of the auction

site rises the auction price from the lowest purchase price to the highest purchase price stored in the auction price storing means.

9. The method of claim 1 or 2, wherein the server of the auction site rises the auction price according to a certain unit time price rising range.

10. The method of claim 9, wherein the server of the auction site varies the unit time price rising range according to a present price.

11. The method of claim 4, wherein the knocking down step includes the sub-steps of:

failing in the auction about the auction object when the auction price reaches to the limitation price in the knocking down step and ending all auctions of the auction timetable;

updating the auction timetable according to the auction progress order of the auction timetable in accordance with the rest of the number of auction repetition times;

storing the updated auction timetable in the auction progress information storing means; and

proceeding an auction according to the updated auction timetable.

12. The method of claim 11, wherein the buyer can re-input

an auction price right after failing in the auction and before an auction proceeds again according to the updated auction timetable.

13. The method of claim 11, wherein the auction progress order of the auction object before the update is not changed by forming the auction timetable as a queue format.

14. The method of claim 11, wherein the server of the auction site transmits the updated auction time to the seller and the buyer after updating the auction timetable.

15. The method of claim 1, 2, 3 and 4, wherein same credit points are provided to a seller and a buyer when they participate in the auction for the first time.

16. The method of claim 15, wherein the buyer having low credit points can have a handicap in selecting an auction time.

17. The method of claim 15, wherein the seller having low credit points can have a handicap in selecting an auction time.

18. The method of claim 15, wherein the seller can have a handicap in credit points when the seller does not delivery the object knocked down within a certain period determined by the auction site.

19. The method of claim 15, wherein the buyer can have a handicap in credit points when the buyer does not transfer the purchase money within a certain period determined by the auction site.

20. The method of claim 1 or 2 or 4, wherein a first bidding buyer is determined according to a click signal of the bid button transmitted first to the server of the auction site.

FIG. 1

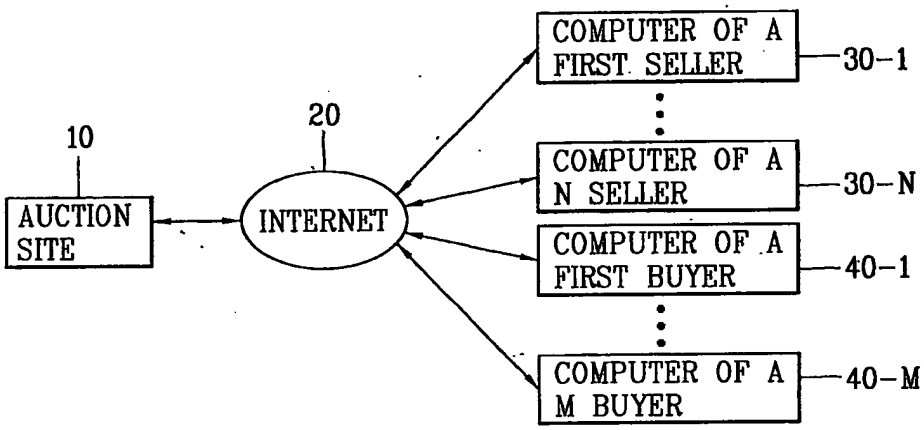

10
AUCTION SITE
20
INTERNET
COMPUTER OF A FIRST SELLER
30-1
COMPUTER OF A N SELLER
30-N
COMPUTER OF A FIRST BUYER
40-1
COMPUTER OF A M BUYER
40-M

FIG. 2

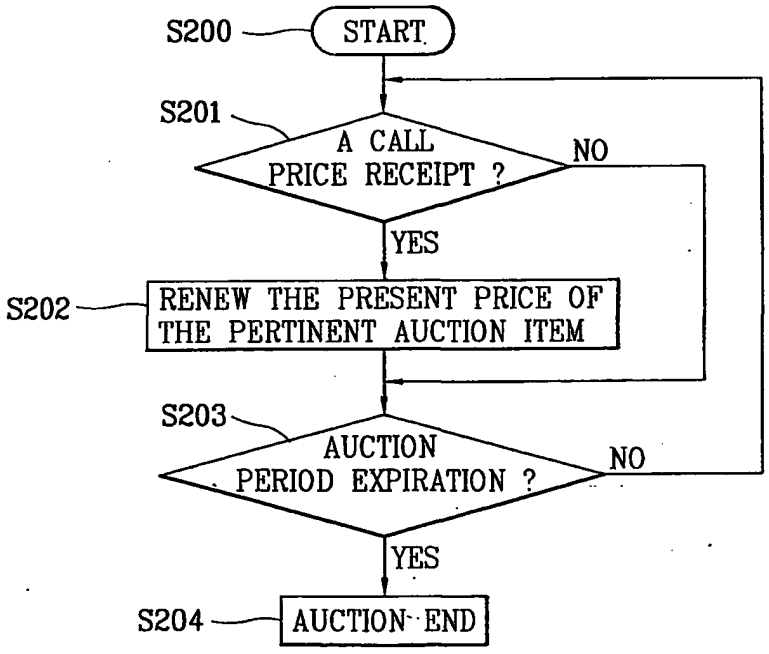

S200
START
S201
A CALL PRICE RECEIPT ?
NO
YES
S202
RENEW THE PRESENT PRICE OF THE PERTINENT AUCTION ITEM
S203
AUCTION PERIOD EXPIRATION ?
NO
YES
S204
AUCTION END

FIG. 3A

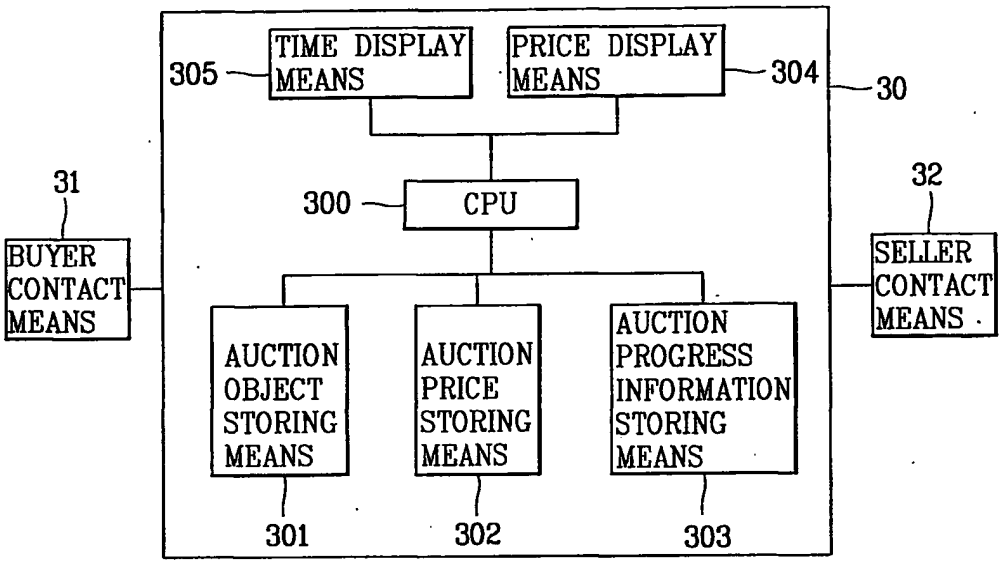

TIME DISPLAY MEANS
305
PRICE DISPLAY MEANS
304
30
31
300
CPU
32
BUYER CONTACT MEANS
SELLER CONTACT MEANS
AUCTION OBJECT STORING MEANS
AUCTION PRICE STORING MEANS
AUCTION PROGRESS INFORMATION STORING MEANS
301
302
303

FIG. 3B

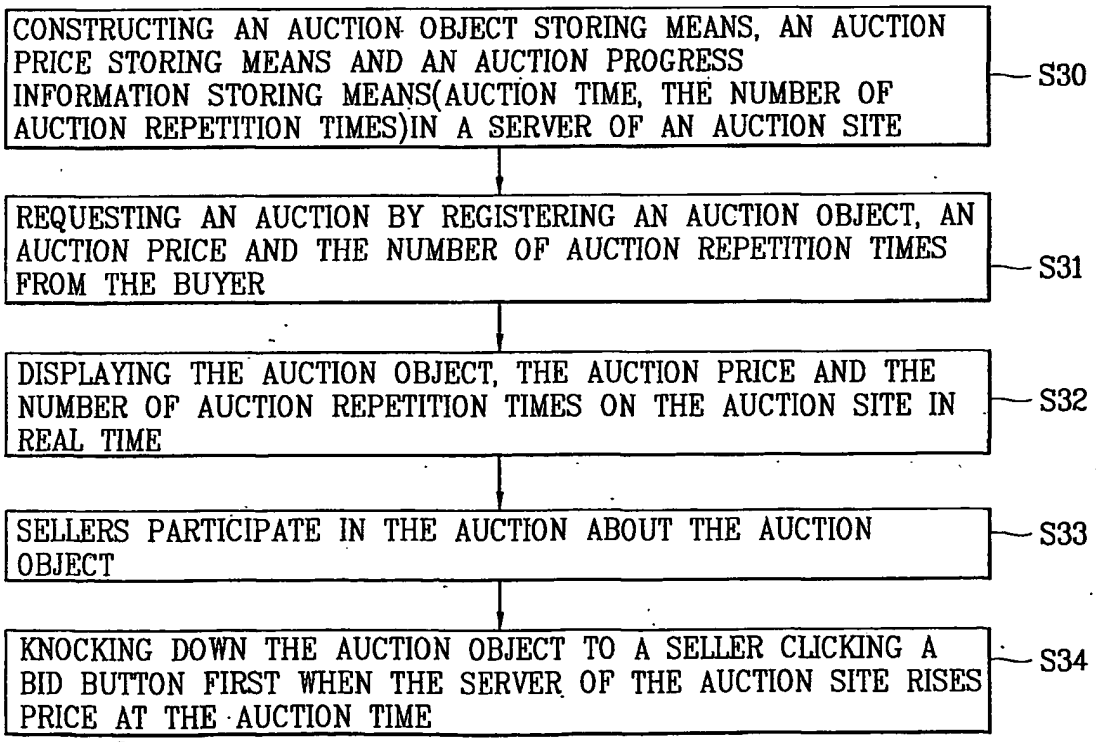

CONSTRUCTING AN AUCTION OBJECT STORING MEANS, AN AUCTION PRICE STORING MEANS AND AN AUCTION PROGRESS INFORMATION STORING MEANS(AUCTION TIME, THE NUMBER OF AUCTION REPETITION TIMES)IN A SERVER OF AN AUCTION SITE
S30
REQUESTING AN AUCTION BY REGISTERING AN AUCTION OBJECT, AN AUCTION PRICE AND THE NUMBER OF AUCTION REPETITION TIMES FROM THE BUYER
S31
DISPLAYING THE AUCTION OBJECT, THE AUCTION PRICE AND THE NUMBER OF AUCTION REPETITION TIMES ON THE AUCTION SITE IN REAL TIME
S32
SELLERS PARTICIPATE IN THE AUCTION ABOUT THE AUCTION OBJECT
S33
KNOCKING DOWN THE AUCTION OBJECT TO A SELLER CLICKING A BID BUTTON FIRST WHEN THE SERVER OF THE AUCTION SITE RISES PRICE AT THE AUCTION TIME
S34

FIG. 4A

AUCTION START TIME	BUYER	THE NUMBER OF AUCTION REPETITION TIMES
09 :00	A	2
10 :00	B	3
10 :40		

FIG. 4B

AUCTION START TIME	BUYER	THE NUMBER OF AUCTION REPETITION TIMES
09 :20	AA	2
09 :50	BB	1
10 :30	CC	3
11 :00		
11 :30		

FIG. 4C

AUCTION START TIME	BUYER	THE NUMBER OF AUCTION REPETITION TIMES
09 :40	AAA	1
10 :00		
10 :50		

FIG. 5

AUCTION START TIME	AUCTION OBJECT	PURCHASE PRICE	THE HIGHEST PURCHASE PRICE	THE LOWEST PURCHASE PRICE	THE NUMBER OF AUCTION REPETITION TIMES(PRESENT)
09 :00	A's CAMERA	20$	30$	15$	2
09 :20	B's CAMERA	10$	20$	7$	1
09 :40	A's CAMERA	30$	40$	23$	5
09 :50	D's CAMERA	40$	55$	30$	4
10 :00	C's CAMERA	25$	30$	17$	2
10 :00	B's CAMERA	34$	43$	25$	3

FIG. 6

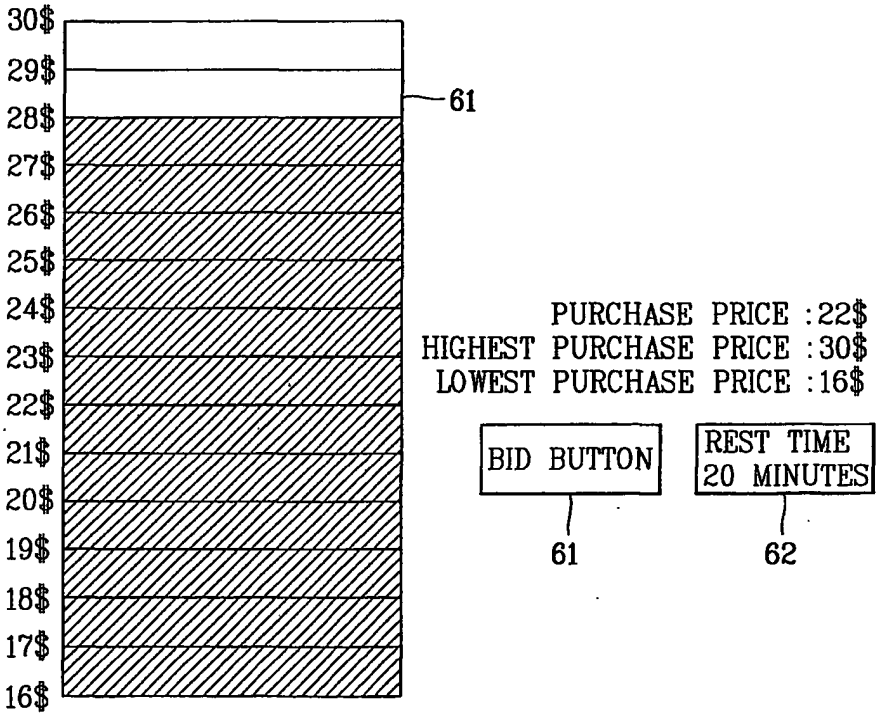
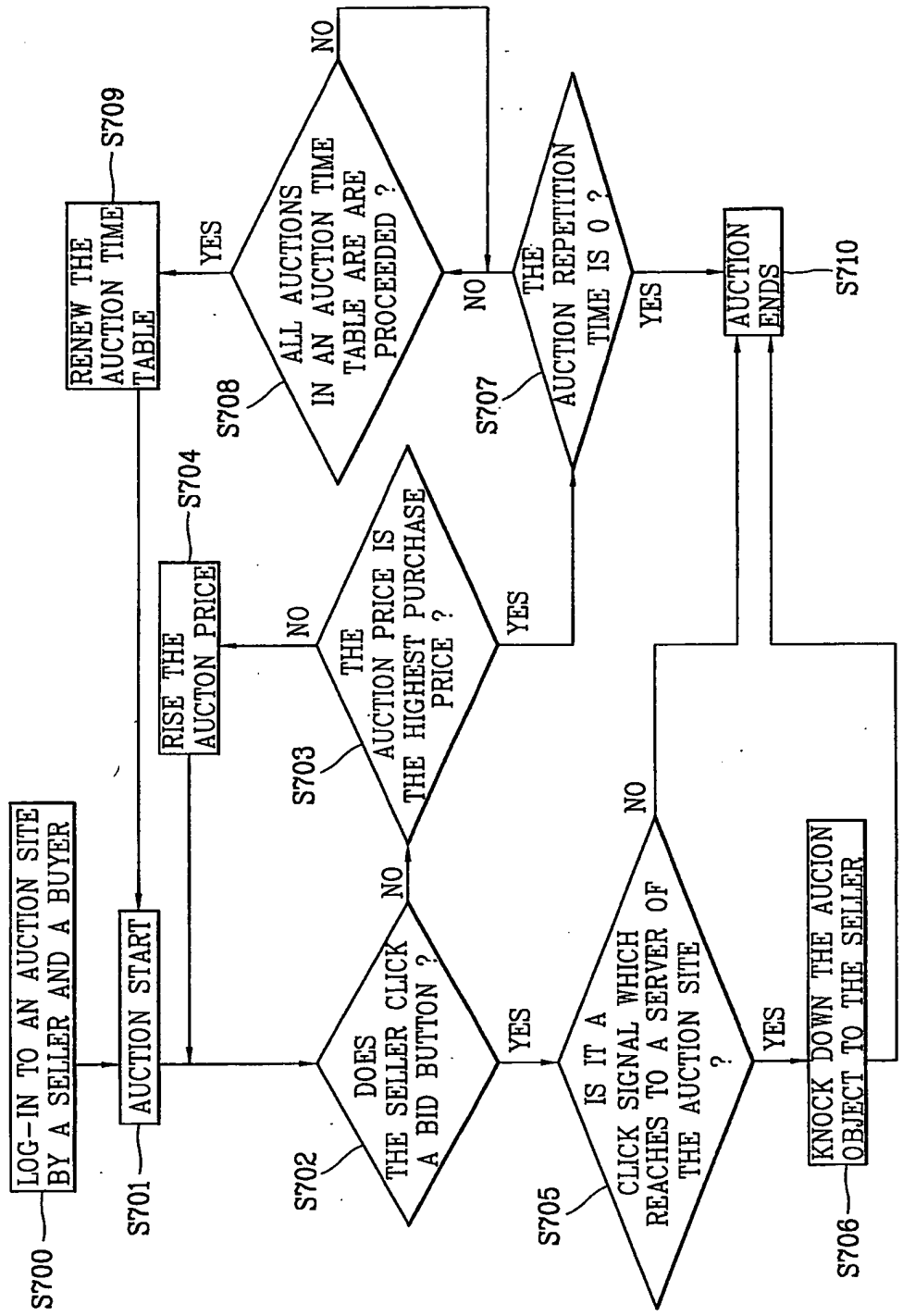


FIG. 7


LOG-IN TO AN AUCTION SITE BY A SELLER AND A BUYER
S700
AUCTION START
S701
DOES THE SELLER CLICK A BID BUTTON ?
S702
NO
YES
THE AUCTION PRICE IS THE HIGHEST PURCHASE PRICE ?
S703
NO
YES
RISE THE AUCTON PRICE
S704
IS IT A CLICK SIGNAL WHICH REACHES TO A SERVER OF THE AUCTION SITE ?
S705
NO
YES
KNOCK DOWN THE AUCION OBJECT TO THE SELLER
S706
THE AUCTION REPETITION TIME IS 0 ?
S707
NO
YES
ALL AUCTIONS IN AN AUCTION TIME TABLE ARE ARE PROCEEDED ?
S708
NO
YES
RENEW THE AUCTION TIME TABLE
S709
AUCTION ENDS
S710

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00887

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC7 G06F 17/60

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

Korean Patents and applications for inventions since 1975

Electronic data base consulted during the internationl search (name of data base and, where practicable, search trerms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 10-078992 A (HITACHI LTD.) 24 MARCH 1998 See abstract, Fig 1, 19	1-2, 5-8
Y	KR 2000-30465 A (IN-HAK RYU) 5 JUNE 2000 See abstract	1-2, 5-8

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevence

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
10 MAY 2001 (10.05.2001)	10 MAY 2001 (10.05.2001)

Name and mailing address of the ISA/KR	Authorized officer
Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140	KWON, Oh Bok Telephone No. 82-42-481-5994

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00887

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to part of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☒ Claims Nos.: 15, 20
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Search Authority found multiple inventions in this international application, as follows:

1. ☐ As all required addtional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be established without effort justifying an additional fee, this Authority did not invite payment of any addition fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.